



# **Alternate Concentration Limits - Status**

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# ALTERNATE CONCENTRATION LIMITS

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## REGULATORY FRAMEWORK:

10 CFR Part 40, Appendix A, Criterion 5B6

Licensee can submit ACLs that present no significant hazard and must provide the basis for any proposed limits including consideration of practicable corrective actions, that limits are as low as reasonably achievable, and information on the factors the Commission must consider. The Commission will establish a site specific alternate concentration limit for a hazardous constituent if it finds that the proposed limit is as low as reasonably achievable, after considering practicable corrective actions, and that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded.

# NRC Guidance:

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NRC Guidance used for ACL reviews: NUREG-1620 Section 4.3 and appendix K (4.4.3. for models)

Point of Compliance

Point of Exposure

Risk informed/Risk based

NEPA Evaluation - Environmental Assessment - State/Indian Tribe consultation



# **ACL Applications - Approved**

- % Arco Bluewater
- % Exxon
- % Bear Creek
- % Petrotomics
- % L-Bar
- % Umetco
- % Pathfinder Lucky Mc
- % Rio Algom – Lisbon (Pending)
- % Title I sites - Canonsburg, Old Rifle

# ACL Applications

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## Under NRC Review:

- % WNI Split Rock - Land acquisition and institutional control issues
- % PMC - Shirley Basin - Surface water issues  
State/EPA/F & W Comments
- % Rio Algom - Ambrosia Lake - Review by NRC contractor - Exposure assessment issues
- % Title I sites - New Rifle - Non-human potential impact issues

# Lessons Learned

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- % Characterize contamination fully
- % State/EPA/Indian Tribe issues
- % Impact to surface waters
- % Models - Calibration, account for uncertainty, send input files
- % Post-remediation monitoring program
- % Off-site contamination
- % Water rights, mineral rights, land ownership



# Site Review Status - Issues

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- % Split Rock Site: Status
  - % Off-site contamination
  - % “good faith” effort to acquire land
  - % Licensee supplemental modeling
  - % Comments from the Wyoming DEQ
  - % Comments from the DOE
  - % WNI attempting to acquire land or institutional controls
  - % Staff drafting environmental assessment. Land issues need resolution first.

# Site Review Status - Issues (Contd.)

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## % Pathfinder Mines Shirley Basin Site: Status

- % Groundwater seepage into surface water
- % Comments from EPA/State/ Fish & Wildlife on potential surface water impacts
- % Stream survey to assess risk to water quality and non-human life
- % Long-term surface water monitoring after groundwater pumping ceases
- % Resolve comments from EPA/State/ Fish & Wildlife
- % Final Environmental Assessment



# Site Review Status - Issues (Contd.)

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## % Rio Algom Ambrosia Lake Site: Status

- % Review by NRC contractor
- % Complicated site characteristics
- % State issues
- % Other sources of contamination (background)
- % Modeling issues

# Other Sites with Groundwater Issues

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## % UNC Churchrock

- % Superfund site - EPA
- % State and Navajo involvement
- % Off-site contamination
- % Potential institutional controls

## % Homestake

- % Superfund site - EPA - State involvement
- % Complex hydrogeology - multiple aquifers
- % Comprehensive active corrective action on-going
- % Alternate water supply

# Other Groundwater Sites

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- % Sequoyah Fuels Site
  - % Transfer to 11.e(2) site (UMTRCA)
  - % Complex hydrogeology - multiple aquifers
  - % Groundwater monitoring plan- Reclamation Plan - GW Corrective action plan (interim groundwater recovery on-going)
  - % Issues with Cherokee Nation and State
  - % EPA involvement



# Other Sites with Groundwater Issues (contd.)

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- % Riverton Title I site - Natural flushing
  - % Indian Tribe issues with institutional controls and alternate water supply
  - % State involvement
  - % Site characterization issues
- % Shiprock Title I - Active Remediation
  - % Navajo and Hopi issues
- % Lakeview, Gunnison, Naturita, Monument Valley, Durango, Green River